ventional energy sources in the state; and

(d) the amount and target earmarked for this purpose during the Eighth Five Year Plan in the State?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) Non-Conventional energy projects based on solar energy, wind energy, biomass and small hydro have been taken up in Gujarat for generation of electricity.

The following systems have so far been installed in the State:

(i) Wind Energy Power	28 MW
(ii) Small Hydro Power	2 MW
(iii) Biomass Gasifiers	1.3 MW
(iv) Solar Photovoltaic Power Plants	14 MW
(v) Stand alone SPV systems for lighting and communitry facilities	2163 Nos.

(b) A total amount of Rs. 1.76 crores has been provided to the State during the last two years as per the folowing break-up:

(i) 1992-93	Rs. 0.38 crore
(ii) 1993-94	Rs. 1.38 crores

(c) The State Government has estimated a wind power potential of 5,000 MW based on the length of the coast in the State.

(d) State-wise allocation and targets have not been fixed for the Eighth Plan, Projects are taken up as per the guidelines and norms for each programme; and, depending upon their technical feasibility availability of budgetary resources and mobilisation of resources for private sector projects.

Pending Applications before renewable energy development agency

5968. DR. SHRIKANT RAMCHANDRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) what is the total amount of funds available with the Indian renewable Energy Development Agency Ltd. for disbursement during the current year for various projects;

(b) the number of applications pending before the agency alongwith the amount involved; and

(c) what is the mechanism of evaluation of sanctioned projects?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) IREDA has fixed a disbursement target of Rs. 189.42 crores for the year 1994-95. The resources for this will come through equity contribution by the Government reserves and surpluses of IREDA, repayment of loans by borrowers and assistance from the World Bank under the "India Renewable Resources Development Project". The expected fund availability position with IREDA during 1994-95 is as follows:

(i) Liquidity	Rs. 5 30 crores
(ii) Reserves and Surpluses	Rs. 9 17 crores
(iii) Repayment of loans	Rs. 14.41 crores
(iv) Reimbursement from the World Bank of the loans already disbursed by IREDA during 1993-94	Rs. 25.94 crores
(v) Likely procurement of World Bank loan and grant	Rs. 152.84 crores
(vi) Equity contribution from Govt. of India	Rs. 14 crores.

(b) As on 31.3.1994, 24 applications for loan assistance amounting to Rs. 43.61 crores from IREDA are pending with IREDA.

(c) After the project is sanctioned an independent assessment of the progress of the project from an independent chartered accountant is required to be obtained by the project promoter in each case and the same furnished to IREDA. Inspections by the officers of IREDA to assess the implementation of all the projects are done to make recommendations regarding requirements of funds to be released. On the basis of the above assessment the first instalment of loan assistance is released. The above process in normally repeated before any disbursement is made subsequently. IREDA also sometime engages the service of independent experts|professionals to assess the progress of the project. Further, the progress of the implementation of the project is also monitored through periodical reports which are required to be sent to IREDA by the project promoter and through reports of Nominee Director on the Board of the assisted companies, wherever appointed by the IREDA.

Independent evaluation of the sanctioned project is also done in some cases on its completion. The task is assigned to outside consultants.

Biomass waste to generate energy

5969. SHRI SATISH PRADHAN: Will the PRIME MINISTER be pleased to state:

(a) whether Government have any plants to use Biomas waste to generate energy if so, what are the details thereof;

(b) whether any experiments have been carried out to use municipal waste water and Industrial waste water to generate energy, if so, the results thereof; and

(c) whether Government would consider substantial aid to the Municipalities desirous of installing energy generating plants?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) Yes, Sir, schemes have been evolved for utilisation of biomass waste to generate energy in rural, urban municipal and industrial sectors. A programme for development of high rate biomethanation process to utilise such wastes has been initiated with partial assistance from UNDP|GEF at an estimated cost of Rs. 40 crores. The programme covers the setting up of 16 numbers demonstration projects for biomethanation including utilisation of the gas besides development of institutional framework, requisite expertise and capabilities, and creation of awareness etc., adoption of suitable technologies and qualitative and quantitative potential in different sectors and preparation of a shelf of investment proposals are included in the objectives.

(b) Experiments have been carried out through R&D organisations national laboratories and others to use municipal waste water (Sewage) and industrial waste water (effluents) to generate energy in the form of biogas. Results have shown that yield of gas to be about 0.056 m3 per m3 of sewage having BOD level of 150 mg|1. Similarly, in case of distillery waste of 45000 mg|1 BOD level, about 2.5 m3 gas can be generated from 1 m3 waste. Sewage treatment plants installed at six locations under the Ganga Action Plan have been connected with biogas recovery system. Industrial effluents mainly distilery effluents (about 70 numbers) which are to be treated prior to discharge have also incorporated energy recovery system.

(c) Substantial financial assistance is already being provided to State